What is claimed is:

particles dispersed in a dispersion medium, the difference  $(D_{90} - D_{10})$  between  $D_{90}$  and  $D_{10}$  being not more than 25 nm, wherein  $D_{90}$  and  $D_{10}$  represent the primary particle size that the pigment particles having a primary particle size up to and including  $D_{90}$  account for 90% by number of the total pigment particles, and the particle size that the pigment particles, and the particle size that the pigment particles having a primary particle size up to and including  $D_{10}$  account for 10% by number of the total pigment particles, respectively, in the integral of the primary particle size distribution function  $dG = f(D) \times dD$  of the pigment particles in which G is a particle number (%) and D is a primary particle size (nm).

- 2. The pigment dispersion liquid of claim 1, wherein the average primary particle size of the pigment particles is not more than 30 nm.
- 3. The pigment dispersion liquid of claim 1, further comprising a water soluble polymer or a surfactant.
- 4. The pigment dispersion liquid of claim 1, wherein a water soluble polymer is adsorbed on the surface of the pigment particles.

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- 5. The pigment dispersion liquid of claim 4, wherein the water soluble polymer has an anionic polar group.
- 6. The pigment dispersion liquid of claim 1, wherein a surfactant is adsorbed on the surface of the pigment particles.
- 7. The pigment dispersion liquid of claim 1, wherein the pigment dispersion liquid comprises a pigment derivative having a polar group.
- 8. The pigment dispersion liquid of claim 1, wherein the dispersion medium is an aqueous medium containing water in an amount of at least 50% by weight.
- 9. A pigment dispersion liquid comprising pigment particles dispersed in a dispersion medium, the polydispersity index (PDI) of the pigment particles represented by formula (1) being not more than 2, formula (1)

 $PDI = (D_{90} - D_{10}) / D_{50}$ 

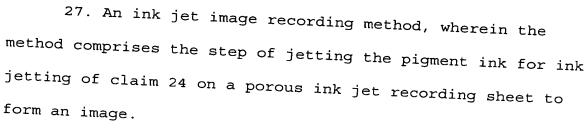
wherein  $D_{90}$ ,  $D_{50}$ , and  $D_{10}$  represent the primary particle size that the pigment particles having a primary particle size up to and including  $D_{90}$  account for 90% by number of the total pigment particles, the primary particle size that the pigment particles having a primary particle size up to and including  $D_{50}$  account for 50% by number of the total pigment particles,

and the particle size that the pigment particles having a primary particle size up to and including  $D_{10}$  account for 10% by number of the total pigment particles, respectively, in the integral of the primary particle size distribution function  $dG = f(D) \times dD$  of the pigment particles in which G is a particle number (%) and D is a primary particle size (nm).

- 10. The pigment dispersion liquid of claim 9, further comprising a water soluble polymer or a surfactant.
- 11. The pigment dispersion liquid of claim 9, wherein a water soluble polymer is adsorbed on the surface of the pigment particles.
- 12. The pigment dispersion liquid of claim 11, wherein the water soluble polymer has an anionic polar group.
- 13. The pigment dispersion liquid of claim 9, wherein a surfactant is adsorbed on the surface of the pigment particles.
- 14. The pigment dispersion liquid of claim 9, wherein the pigment dispersion liquid comprises a pigment derivative having a polar group.
- 15. The pigment dispersion liquid of claim 9, wherein the dispersion medium is an aqueous medium containing water in an amount of at least 50% by weight.

- 16. A process for manufacturing a pigment dispersion liquid, wherein the process comprises the step of mixing a solution containing pigment and a polymer with a liquid medium in which the pigment are insoluble to precipitate pigment particles.
- 17. The process of claim 16, wherein the polymer is water soluble, and at least 50% by weight of the liquid medium is water.
- 18. The process of claim 16, wherein desalting is carried out at the same time as the precipitation of the pigment particles.
- 19. A process for manufacturing a pigment dispersion liquid, wherein the process comprises the step of mixing a solution containing pigment with a liquid medium containing a polymer, the pigment being insoluble in the liquid medium, to precipitate pigment particles.
- 20. The process of claim 19, wherein the polymer is water soluble, and at least 50% by weight of the liquid medium is water.
- 21. The process of claim 20, wherein desalting is carried out at the same time as the precipitation of the pigment particles.

- 22. A process for manufacturing a pigment dispersion liquid, wherein the process comprises the step of mixing a solution containing pigment and a surfactant with a liquid medium in which the pigment is insoluble to precipitate pigment particles.
- 23. A pigment ink for ink jetting comprising the pigment dispersion liquid of claim 1 or the pigment dispersion liquid manufactured according to the process of claim 16.
- 24. A pigment ink for ink jetting comprising the pigment dispersion liquid of claim 9 or the pigment dispersion liquid manufactured according to the process of claim 19.
- 25. An ink jet image recording method, wherein the method comprises the step of jetting the pigment ink for ink jetting of claim 23 on a porous ink jet recording sheet to form an image.
- 26. The ink jet image recording method of claim 25, wherein the average primary particle size of the pigment particles contained in the pigment ink is not more than 80% of an average void size of the porous ink jet recording sheet.



- 28. The ink jet image recording method of claim 27, wherein the average primary particle size of the pigment particles contained in the pigment ink is not more than 80% of an average void size of the porous ink jet recording sheet.
- 29. A process for manufacturing a pigment dispersion liquid, wherein the method comprises the step of adding a pigment solution to an aqueous pigment solution in which a pigment derivative having an anionic group is dissolved in an aqueous medium or an aqueous pigment dispersion liquid in which a pigment derivative having an anionic group is dispersed in an aqueous medium.
- 30. The process of  $\sqrt{\text{laim 29}}$ , wherein the pigment derivative has the same nucleus as the pigment.
- 31. The process of claim 29, wherein the pigment derivative and the pigment each have a quinacridone nucleus, and the pigment solution is a solution in which the pigment is dissolved in an alkali aprotic polar solvent.

is a sulfonic acid group or ts salt group.

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33. A pigment ink manufactured from the pigment dispersion liquid manufactured according to the process of claim 29.